

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 44

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ROY A. OSTGAARD, EDWARD J. O'CONNELL  
and MARK J. LICARI

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Appeal No. 2003-1946  
Application 09/156,952

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ON BRIEF

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Before OWENS, LIEBERMAN and KRATZ, *Administrative Patent Judges*.  
OWENS, *Administrative Patent Judge*.

*DECISION ON APPEAL*

This appeal is from the final rejection of claims 1-8, 10 and 12-26, which are all of the claims remaining in the application.

*THE INVENTION*

The appellants claim a sample vial having on the body thereof at least one specified anti-rotation lug for reacting against proximate structure of an automated test apparatus to facilitate at least one automatic removal and installation of the

sample vial's cap. Claim 1 is illustrative:

1. A sample vial for use in an automated test apparatus, the sample vial comprising:

a body comprising an outer surface, an open end, a closed end, and at least one anti-rotation lug about said body outer surface, the anti-rotation lug comprising a generally flat, longitudinally disposed surface extending radially outwardly from said body outer surface, the longitudinally disposed surface comprising a lowermost edge that is substantially perpendicular to said body outer surface, the lowermost edge located closer to the open end than to the closed end;

a cap releasably engagable with said body, said cap comprising an outer surface and a torque pattern on said cap outer surface, said torque pattern comprising a plurality of radially disposed ribs; and

a seal disposed between said body and said cap so as to be capable of forming a substantially fluid-tight seal therebetween,

wherein both of the flat surface and the lowermost edge of the at least one anti-rotation lug is accessible when the cap is engaged with the body for reacting against proximate structure of the automated test apparatus when installed therein to facilitate at least one of automated removal and installation of the cap.

#### *THE REFERENCES*

Moore	5,855,289	Jan. 5, 1999 (filed Apr. 25, 1997)
Brodner	5,894,733	Apr. 20, 1999 (filed Jan. 7, 1998)

#### *THE REJECTION*

Claims 1-8, 10 and 12-26 stand rejected under 35 U.S.C.  
§ 103 as being unpatentable over Brodner in view of Moore.

OPINION

We affirm the aforementioned rejection.

The appellants provide no statement that the claims do not stand or fall together (brief, page 4). The claims, therefore, stand or fall together and, accordingly, we limit our discussion to one claim, i.e., claim 1, which is the sole independent claim. See *In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1997).

Brodner discloses a centrifuge tube comprising a specimen container (10) and a sleeve (12) having a cylindrically shaped interior chamber (42) sized for telescopically receiving a lower portion (44) of the specimen container's tubular body (18) (col. 1, lines 10-13; col. 3, lines 3-6). The sleeve has a locking portion (46) for releasably holding the sleeve in secured engagement with the tubular body after the tubular body has been inserted into the sleeve (col. 3, lines 6-11 and 22-27).

Thus, when the specimen container and sleeve are in secured engagement, they form a body. This body has an outer surface (40), an open end (22) opposite a closed end (figure 4), and outer, vertically oriented anti-rotation ridges (56) about the outer surface (figure 2). The anti-rotation ridges have a generally flat, longitudinally disposed surface extending

radially outward from the body outer surface (figures 1-4), and a lowermost edge which is located closer to the open end than to the closed end (figures 1, 2 and 4). The lowermost edge is shown in figure 4, particularly on the left side, as being substantially perpendicular to the body outer surface.

The specimen container's tubular body has an upper portion (20) adapted for receiving a cap (24) having an outer surface (col. 2, lines 51-52). The outer surface does not include a torque pattern. However, it is undisputed that it would have been obvious to one of ordinary skill in the art to include on the outer surface the torque pattern of Moore's centrifuge tube cap (figures 3 and 5). Also, there is no dispute as to whether it would have been obvious to one of ordinary skill in the art to include, between the body and the cap, a seal which is capable of forming a substantially fluid-tight seal.

Both the flat surface and the lowermost edge of Brodner's outer anti-rotation ridges are accessible when the cap is engaged with the body (figure 4). When the body is inserted into a tray (16), the outer ridges produce a locking type action with a plurality of small ridges (68) in an aperture (62) in the tray (col. 3, lines 34-40; figure 4). There is no dispute as to whether the anti-rotation ridges are capable of reacting against

proximate structure of an automated test apparatus when installed therein to facilitate at least one automated removal and installation of the cap.

The appellants argue that the lower edges of Brodner's ridges appear to be beveled or tapered rather than being substantially perpendicular to the body outer surface (brief, page 6; reply brief, page 4). Brodner does not disclose that the lower edges of the ridges are beveled or tapered, or indicate that they should be beveled or tapered, and the ridges in figure 4, particularly the one on the left side, appear to have lower edges which are perpendicular to the body outer surface. Thus, the ridges which Brodner would have been fairly suggested to one of ordinary skill in the art include ridges having lower edges which are substantially perpendicular to the body outer surface.

The appellants argue that the lower edges of Brodner's sleeve outer ridges must be beveled in order to not abut against the upper edges of the tray ridges when the sleeve is slid into the tray aperture (brief, page 7; reply brief, page 5). Brodner's sleeve outer ridges, however, do not need to press against the tray ridges but, rather, can slide between the tray ridges (col. 3, lines 38-40). Sleeve outer ridge lower edges

which are perpendicular to the body outer surface would not interfere with the sliding of the outer sleeve ridges between the tray ridges.<sup>1</sup> If anything, the teaching that the sleeve outer ridges produce a locking type action with the tray ridges (col. 3, lines 38-40) would have fairly suggested, to one of ordinary skill in the art, making the lower edges of both the sleeve outer ridges and the tray ridges perpendicular to the outer surfaces of, respectively, the sleeve and the tray, to maximize the contact area of the abutting ridges and thereby maximize the locking action.

The appellants argue that the lowermost edges of their anti-rotation lugs (18) must be substantially perpendicular to the outer surface of the body (12) to ensure that the vial (10) will not 1) penetrate too deeply into the bores (52, 62) of the sample vial tray, causing the vial to jam in the apparatus, and 2) axially translate into an improper position in the vial sleeve (64) (brief, pages 6-7). There is no textual support in the appellants' specification for this argument. Thus, the argument is unpersuasive as being mere attorney argument. *See In*

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<sup>1</sup> Some rotation of the sleeve may be needed for the sleeve ridges to be positioned between the tray ridges, but such rotation also would be needed if the edges of the ridges were beveled.

*re De Blauwe*, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984). Regardless, it does not reasonably appear that the anti-rotation lug lower edges shown in Brodner's figure 4, or even those shown in figure 2, are sufficiently tapered to cause the problems argued by the appellants.

Significantly, there is no textual support in the appellants' specification for the claim requirement that the lowermost edges of the anti-rotation lugs be substantially perpendicular to the body outer surface. The support for this claim requirement relied upon by the appellants is their drawing figures 1, 2, 4 and 5 (amendment and response filed October 19, 2001, paper no. 22, page 4). The specification, however, states that "other suitable materials, dimensions, and configurations for the body, the cap, the ribs, the lugs, the fluid level indicia, and other features of the sample vial will be apparent to those skilled in the art, those disclosed being provided as examples only" (specification, page 14, lines 14-16). Thus, the term "substantially perpendicular", when given its broadest reasonable interpretation in view of the appellants' specification, see *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), encompasses considerable deviation from perpendicular and, therefore, encompasses the deviation, if

any, from perpendicular of the anti-rotation ridge lower edges shown in Brodner's figures 2 and 4. See *In re Nehrenberg*, 280 F.2d 161, 165, 126 USPQ 383, 386 (CCPA 1960) ("Substantially", in "substantially homogeneous and ferritic", is a broad term.)

The appellants argue that the body in their claim 1 is a vial body, whereas Brodner's specimen container and sleeve are separate bodies (reply brief, pages 2-3). A body, the appellants argue, is "a mass of matter distinct from other masses." See *id.* When Brodner's specimen container and sleeve are snapped together (col. 3, lines 6-10 and 22-27) they form a mass of matter distinct from other masses and, therefore, are a body. The appellants argue as though a body must be a single piece having no separable components, which is not correct. An automobile body, for example, is an assembly of a number of parts.

Even if Brodner's specimen container and sleeve are considered separate bodies, Brodner would have fairly suggested the appellants' claimed sample vial to one of ordinary skill in the art. Brodner's specimen container itself has a body (18) having an outer surface and an open end (22) opposite a closed end (figure 2), and a cap (24) releasably engagable with the body



(col. 2, lines 53-54).<sup>2</sup> The body has thereon vertically oriented anti-rotation ridges (34) (col. 3, lines 47-49) having lower edges which are closer to the open end than to the closed end (figures 1 and 2).<sup>3</sup> Brodner does not describe the shape of the specimen container's anti-rotation ridges. Brodner, however, teaches that these ridges are in pressing engagement between (not against) the sleeve's inner ridges (58) to prevent twisting or turning of the sleeve on the specimen container (col. 3, lines 47-49). This teaching would have fairly suggested, to one of ordinary skill in the art, specimen container ridges and sleeve ridges having the same shape for maximizing the pressing engagement and thereby maximizing the prevention of twisting or turning of the sleeve on the specimen container. Thus, like the sleeve's inner ridges, the specimen container's anti-rotation ridges would have a generally flat, longitudinally disposed surface extending radially outward from the specimen container's outer surface, as shown in figures 2 and 4 and, as shown particularly in figure 4, could have a lower edge shape which is

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<sup>2</sup> As discussed above, it is undisputed that it would have been obvious to one of ordinary skill in the art to place between the body and the cap a seal which is capable of forming a substantially fluid-tight seal between them.

<sup>3</sup> In figure 2 the numbers 10 and 34 should be reversed.

substantially perpendicular to the body of the specimen container. The generally flat surface and the lowermost edge of the specimen container's ridges would be accessible when the cap is engaged with the body (figure 4). Specimen container anti-rotation ridges having this shape necessarily would be capable of reacting against proximate structure of an automated test apparatus when installed therein to facilitate at least one automated removal and installation of the cap.

For the above reasons, we conclude that the appellants' claimed sample vial would have been obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103.

#### *DECISION*

The rejection of claims 1-8, 10 and 12-26 under 35 U.S.C. § 103 over Brodner in view of Moore is affirmed.

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No time period for taking any subsequent action in  
connection with this appeal may be extended under 37 CFR  
§ 1.136(a).

*AFFIRMED*

TERRY J. OWENS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
PAUL LIEBERMAN	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
PETER F. KRATZ	)	
Administrative Patent Judge	)	

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